

# ARCHAEOLOGIA BULGARICA



XXVII 2023 1

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On the cover: a gem, ca. AD 200; see the paper of Kostova / Sharankov in this issue; photo Nicolay Sharankov.

# The Armour of the Thracian Warriors – an Archaeometrical Approach

ARCHAEOLOGIA BULGARICA  
XXVII, 1 (2023), 1-12

Boika ZLATEVA / Totko STOYANOV / Deyan LESIGYARSKI /  
Velislav BONEV

**Abstract:** The elemental composition of the original metal alloys of the armour of Thracian warriors was determined using a portable X-ray fluorescence spectrometer. The archaeological breastplates date from the late 6<sup>th</sup> to 5<sup>th</sup> c. BC and are of two types: bronze and bimetallic (iron and bronze).

Original metal alloys used by ancient craftsmen to produce specific items were characterized based on the concentrations of 24 chemical elements. The results indicate that for the production of cuirasses, tin bronzes well purified from lead and bismuth has been used. However, the decoration elements and some spare parts (used for armour repair) have also been made of specific alloys.

**Key words:** panoply, bronze cuirass, pXRF, Thrace, Archaic period, Classical period.

## INTRODUCTION

The panoply of Thracian warriors carries valuable information about Thracian warfare, the burial rites of their aristocracy, and their technological and metalworking achievements. Not to mention that the artifacts reflect Thracian beliefs, mythological concepts, aesthetic perceptions, and personal preferences. The present study is focused on the cuirasses found in the territory that was once part of ancient Thrace. The artifacts are dated to the late Archaic and Classical periods (end of the 6<sup>th</sup>-5<sup>th</sup> centuries BC). In fact, there are no articles representing chemical analyses of bronze cuirasses from this period found in the Balkans. There is also a lack of such investigations concerning artifacts of this type from other parts of Europe. Analysis of bronze cuirasses from pre-Roman Italy can be found in the paper of Emmitt et al. (2021).

The work presented here is part of a larger research project on the defensive armour of the Thracians (helmets, cuirasses, greaves, and shields)<sup>1</sup>. This complex archaeometrical investigation includes both chemical analyses to determine the types of alloys used and archaeological data sets for the artifacts. The combination of the obtained data reveals additional information about the Thracians and their habits.

In the last 10-15 years, special attention has been paid to portable XRF spectrometers, usually used for *in situ* analyses at archaeological sites or museum expositions (Frahm / Doonan 2013; Killick 2015; Liritzis et al. 2020). Furthermore, the increasing availability of portable XRF devices, as well as their moderate cost when compared to laboratory-based techniques, more frequently allows the incorporation of chemical examinations in material culture studies.

## MATERIALS AND METHODS

This study presents the results of the chemical analysis of eight cuirasses from rich burials of Thracian warriors, kept in different historical museums in the territory of modern Bulgaria (**fig. 1**). The inves-

<sup>1</sup> “The Panoply of the Thracian warriors: a complex interdisciplinary study of a bronze defensive armor from Thrace” funded by the Bulgarian Scientific Research Fund, Contract KII-06-OIP 05/7, December 17, 2018. As a part of the project, in 2022 a temporary exhibition “The Panoply of the Thracian warriors” was presented in one of the halls of the National Archaeological Institute with Museum, which exhibited a large part of the objects of research in the project – helmets, cuirasses, greaves, and shields, as well as part of the inventory of some representative tomb complexes in which they were found. In the publication presenting the exhibition, Stoyanov et al. (eds.) (in press), the items of defensive armour are presented with detailed catalog annotations and photo documentation. The armour commented on here are # 58-65. Commentary texts are also presented for each artefacts groups.



**Fig. 2.** Bronze cuirass from Tatarevo (Krasimir Georgiev)



**Fig. 3.** Bronze cuirass from Svetlen (Miglena Raykovska)



**Fig. 4.** Bronze cuirass from Tarnicheni (Miglena Raykovska)



**Fig. 5.** Bronze cuirass from Ruets (Miglena Raykovska)



**Fig. 6.** Bronze cuirass from Bashova mound (Miglena Raykovska)



**Fig. 7.** Bronze cuirass from Svetitsa mound (Krasimir Georgiev)

iron gorget (hausse-col) similar to that from Mezek tomb (Ogdenova 1961, 530-531, figs. 15-18). L. Ogdenova admitted armour of Type 2 is not able to be classified amongst the bell-shaped cuirasses, because it performs a more developed design, allowing a greater mobility to the head and neck that is more suitable for use while riding. These are a local invention with no parallels in Greece. The specimen from Dalboki was dated in the end of 5<sup>th</sup> c. BC and those from Ruets and Bashova mound in the beginning of the 4<sup>th</sup> c. BC (Ogdenova 1961, 516-522, 527-535, figs.10-14, 15-19).

# Classical Period Bronze Cauldrons from Thrace

ARCHAEOLOGIA BULGARICA  
XXVII, 1 (2023), 13-24

Yana MUTAFCHIEVA

**Abstract:** This article focuses on presenting a specific type of bronze cauldrons found in Thrace and dated to the Classical period. They are low-necked with a hemispherical body, rounded bottom, riveted handle attachments and ring-shaped handles. They can be associated with the classes of material dedicated to feasting equipment and as toiletry objects, and were probably used in certain rituals. Despite their formal stylistic similarities, the geographical and chronological distribution of the presented examples allows some of them to be ascribed to a particular production workshop.

**Key words:** Bronze cauldrons, Thrace, Classical period.

## INTRODUCTION

The bronze cauldrons dealt with in this article have a simple and chronologically consistent shape. They are part of the household inventory of vessels used for cooking over an open fire. They can also be connected with use as toiletry vessels, and also possibly participating in certain rituals and practices. The cauldrons discussed here have identical characteristics and morphological features, and form the group of cauldrons with a low neck, hemispherical body, rounded bottom, riveted handle attachments and ring handles. A large number of them were found together with iron tripods, which served as stands for the vessels. The cauldrons from Thrace come from burial complexes, and one of them contained a deposited hoard of silver objects. The examined cauldrons can generally be attributed to the Classical period. In different chronological periods, similar vessels were decorated with various attachments - mostly having apotropaic functions.

The current study aims mainly at presenting and analysing the examples of these bronze cauldrons which were discovered in the territory of Thrace. Within the general goal thus set, the main tasks are: to form an outline of the inventory and the complexes from which the bronze vessels originate; to trace the geographical distribution of products identical in shape and decoration; placing the cauldrons in the narrowest possible chronological frame; and two attempt the localisation of the production workshops.

## BRONZE CAULDRONS FROM THE TERRITORY OF THE TRACE

### The cauldron from Kukova tumulus, near the village of Duvanlii, Plovdiv region

The cauldron was discovered in the 1920s in Kukova tumulus (figs. 1a-d, 2a-b). It is made from a hammered bronze sheet and its dimensions are:  $h_{\max} = 26.5$  cm and  $dr_{\max} = 35.5$  cm. Two oppositely placed rectangular handle attachments with decoratively cut-off undersides are attached onto the shoulders of the cauldron and secured with three bronze rivets each (figs. 2a-b). The handle attachments resemble highly stylised birds with spread wings and tail. Two bronze ring-shaped handles (one missing) pass through staples mounted on each of the two attachments; the diameter of the preserved ring is 7.0 cm.



**Fig. 4a.** Bronze cauldron from Letnitsa (T. Dimitrov)



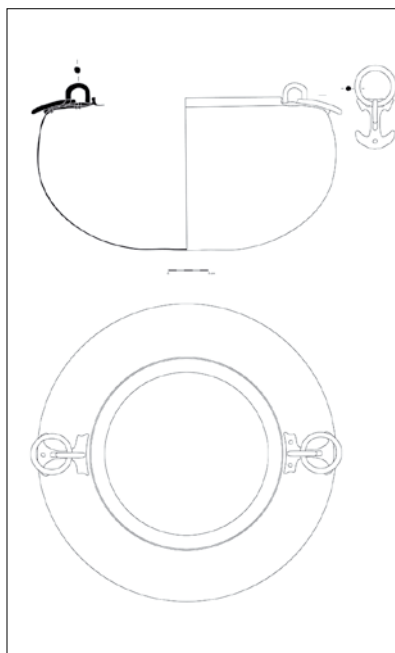
**Fig. 4b.** Bronze cauldron from Letnitsa (Y. Mutafchieva)



**Fig. 4c.** Handle attachment of the cauldron from Letnitsa (Y. Mutafchieva)



**Fig. 4d.** Handle attachment of the cauldron from Letnitsa (Y. Mutafchieva)



**Fig. 4e.** Graphical reconstruction of the bronze cauldron from Letnitsa (Y. Mutafchieva)



**Fig. 4f.** Antique repair patch with four rivets into the bronze cauldron from Letnitsa (Y. Mutafchieva)

283-292; Венедиков / Павлов 1974; Стоянов 1990, 83-87, обр. 1-2; Венедиков 1996, 7-24, обр. 1-21; Бошнакова 2000a, 5-22, обр.1-17; Бошнакова 2000b, 19-29, 1a, 2-7). According to the researchers of the Letnitsa Treasure, the attachments fall within the chronological framework of the second quarter of the 4<sup>th</sup> c. BC (Венедиков 1996, 18) or the third quarter of the 4<sup>th</sup> c. BC (Бошнакова 2000b, 20).

### The Cauldron from Peretu, Romania

The cauldron from Peretu, Romania is in a fragmentary state (Moscalu 1989, 149, Abb. 13; Taf. 48/1; Goldhelm 1994, 160, cat. 48.17; Teleaga 2008, 252, cat. 955; Oanță-Marghitu 2013, 265). The mouth of the preserved upper part of the vessel has (**fig. 5**). Its dimension are:  $dr_{\text{mouth}} = 21.0$  cm and an everted rim. The handle attachments measuring are with  $h = 3.3$  cm,  $l = 7.1$  cm и  $w = 6.0$  cm. They have upper parts shaped like heads of birds, holding the ring-shaped handles ( $dr = 6.6$  cm). The bird-shaped handle attachments are pinned of the shoulders with three rivets

# Radiocarbon Dating of Late Iron Age Graves from Transylvania

ARCHAEOLOGIA BULGARICA  
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Sándor BERECKI

**Abstract:** In order to confirm and narrow down the relative chronology of the Late Iron Age in the Carpathian Basin, eleven samples from three Celtic cemeteries in Transylvania (Archiud-Hânsuri, Fântânele-Dealul Iușului / La Gâța and Fântânele-Dâmbul Popii) were submitted to radiocarbon dating using the AMS method. Based on the measurement of samples from human and animal bones and on additional 14C results from the Carpathian Basin, one could observe that the date ranges, often divided into numerous smaller or larger phases, cover a much wider period than the four Transylvanian Celtic horizons defined based on the typological changes of artefacts linked to historical events or socio-historical phenomena (La Tène B1/B2-C1 phases, 350/335-190/175 BC). The explanation of this circumstance raises further questions of physical and archaeological methodology, interpretation and research.

**Key words:** Late Iron Age, Celts, radiocarbon dating, Transylvania.

Archaeology is fundamentally based on the necessity of placing discovered artefacts in space and time. The most frequently applied method is the typological and technological succession of objects, sometimes correlated with the cultural order (Berecki 2008). The typo-chronological classification follows the evolution of the different archaeological categories. In the case of the Late Iron Age, processes such as the changes in taste for clothing and jewellery (fibulae, bracelets, belts, anklets, pendants, etc.), the evolution of weapons (swords, scabbards, sword-chains and chape-ends, spears, shields, helmets) according to developments in the military technique, the changes in food consumption customs and the technological accomplishments needed to achieve these changes, as well as their spatial transfer are the easiest to trace. Less spectacular are the changes occurred in tools (whetstones, shears, etc.) over time. Of the typo-chronological analyses in the Carpathian Basin the combinatorial and seriation examination of the grave goods from Pișcolt cemetery (Németi 1993) and the analysis of the pottery from Sajópetri (Szabó et al. 2007) are exemplary.

The second half of the last millennium B.C. is characterised by a high degree of demographic and ideological dynamism. Due to the mobility of communities, individuals, know-how and ideologies' changes and developments are also faster, yet differ regionally.

The evolution of objects in shape and aesthetics reveals not only the formal refinement or functional improvement of new technological achievements, but also the relationships between different communities. Besides the spread of new, 'culturally foreign' object types, these interactions often led to their local adaptation. However, interactions are not only perceptible at the level of objects, but also at the cultural and ideological level, observed primarily through regional specificities of rites and rituals.

In understanding these constantly changing societies, temporal classification is an important basis for social theory analysis. For example, the chronological classification of graves makes it possible to study

Age might be related to the freshwater reservoir effect (for FRE in radiocarbon dating see: Philippsen 2013). But in order to establish more precisely the exact nature and extent of this hypothesized effect, it is necessary to examine the currently poorly known Late Iron Age dietary diversity and food consumption customs of the communities and the proportion of resources from freshwater, marine and terrestrial systems at the micro- and macro-regional level.

From a methodological point of view, it can be observed that the calendar years are equally spaced for both animal and human bone samples, although the results from animal bones for the Archiud 31 and Fântânele-Dâmbul Popii 61 graves yielded a slightly narrower time interval (4<sup>th</sup>-3<sup>rd</sup> c. BC).

Although the eleven sample measurements did not yield relevant results in comparing and corroborating the relative and absolute chronology, formulated as the working hypothesis, conclusions can still be drawn for the chronology of the eastern part of the Carpathian Basin. For example, in the case of graves with a relative chronological classification that can be well determined by typo-chronological means, it seems that the first horizon may date slightly earlier than the mid-4<sup>th</sup> century BC, while the last horizon may not even cross into the second century BC. Further research on dietary customs may support or refute the role of the freshwater reservoir effect in early dating.

Furthermore, while the material culture of the Early and Middle La Tène periods in the eastern part of the Carpathian Basin is relatively well separable from the one specific for the subsequent final period of the Late Iron Age, in the Middle Danube region, however, radiocarbon dating is suitable for the separation of the LT A-C and LT D periods. Last but not least, in the case of multi-layered sites (e.g. cemeteries with burials from several chronologically successive periods), radiocarbon dating is the most suitable for the chronological classification of objects for which the inventory does not provide sufficiently precise information for dating.

AMS Lab code	context of the sample	sample type	radiocarbon age BP	calibrated Age BC 2 sigma (95.4% probability) (OxCal v.4.4.4)
DeA-3207	Archiud-Hânsuri, grave 26	human long bones	2343±43	725-231
DeA-3208	Archiud-Hânsuri, grave 31	pig long bones and teeth	2267±42	402-202
DeA-3209	Fântânele-Dealul Iușului, grave 10	human long bones and tooth	2230±41	391-179
DeA-3210	Fântânele-Dealul Iușului, grave 18	human long bones and tooth	2256±45	400-198
DeA-3213	Fântânele-Dealul Iușului, grave 22	human long bones and teeth	2342±43	725-230
DeA-3214	Fântânele-Dealul Iușului, grave 35	human bone	2319±45	537-207
DeA-3215	Fântânele-Dealul Iușului, grave 38	human long bones and teeth	2341±43	724-229
DeA-3216	Fântânele-Dealul Iușului, grave 40	human long bone and tooth	2291±43	412-202
DeA-3217	Fântânele-Dâmbul Popii, grave 58	human bones	2293±46	457-200
DeA-3218	Fântânele-Dâmbul Popii, grave 61	animal bone	2255±43	399-199
DeA-3219	Fântânele-Dâmbul Popii, grave 78	animal bones and teeth	2348±43	732-233

Fig. 17. Radiocarbon dates from Late Iron Age samples in the eastern part of the Carpathian Basin.

# Case of the Wounded Beast: a Red Deer Tibia with Projectile Trauma from *Viminacium*

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XXVII, 1 (2023), 37-47

Dimitrije Z. MARKOVIĆ / Milan I. SAVIĆ /  
Ivan S. BOGDANOVIĆ

**Abstract:** During the excavations of *Viminacium* in 2016, a red deer tibia, with what seemed like a trauma caused by a weapon, was found in the vicinity of the amphitheatre. Consequently, the aim of this research was to determine whether that was the case and to attempt to reconstruct the potential hunting moment. The analysis of the wound suggested that the animal was hit from its right side with a deltoid or leaf-type long-range weapon, such as throwing spears or arrows. The irregular shape of the trauma on the lateral side of the bone was due to the socket that went through it along with the tip of the weapon. Since this wound is located just beneath the knee of the deer, it would not have been enough to kill the animal instantly, but there are no indications of any bone healing, which leads to an assumption of multiple hits, and thus multiple huntsmen involved in the hunt, which was a common practice. There is also a possibility that this particular animal took part in a *venatio*, that is, the beast hunt in the arena, since it was found in a trench related to the amphitheatre, alongside a large number of other wild animals, which undoubtedly participated in the spectacles.

**Key words:** *Viminacium* amphitheatre, red deer, trauma, projectile, Roman hunting, *venatio*.

## INTRODUCTION

Hunting was not an important economic aspect during the Roman Empire since the diet was mainly based on domestic animals and cereals. However, it was practised by both the civilian population and the army, which used it as training to practice certain skills (bow and arrow shooting, slingshot, javelin throwing, horseback riding, etc.); as suggested by the written sources (Toynbee 1973; Epplett 2001, 211; MacKinnon 2006, 7). This is evident by the monument dating to AD 147 found in Montana. It was dedicated by *Tiberius Claudius Ulpianus*, the tribune of the *I Cilicum* cohort, who successfully participated in the hunting of wild animals (Ferjančić 2018, 168).

The most commonly hunted species on the majority of Roman sites in today's Serbia were red deer (*Cervus elaphus*), wild boar (*Sus scrofa*) and brown bear (*Ursus arctos*), with a smaller portion of roe deer (*Capreolus capreolus*), wolf (*Canis lupus*), European hare (*Lepus europeus*) and other animals (Blažić 1995; 2006; Nedeljković 1997; 2009; Vuković 2015; 2020; Vuković-Bogdanović 2017). This situation is similar to most other Roman period sites across Europe (Cool 2006; King 1999; Lauwerier 1988). This is expected, given that these are autochthonous species that were widespread throughout the continent. Aside from the meat, other parts of the animal, such as the skin, cervid antlers and wild boar canines, were used for the production of various objects.

However, apart from sporadic mosaics (Dunbabin 1999), stelae (Mirković 1986), fresco scenes (Bergmann et al. 2018, 305) and literary sources (Toynbee 1973; Anderson 1985), there is little archaeozoological evidence about actual ways these animals were hunted. Therefore,

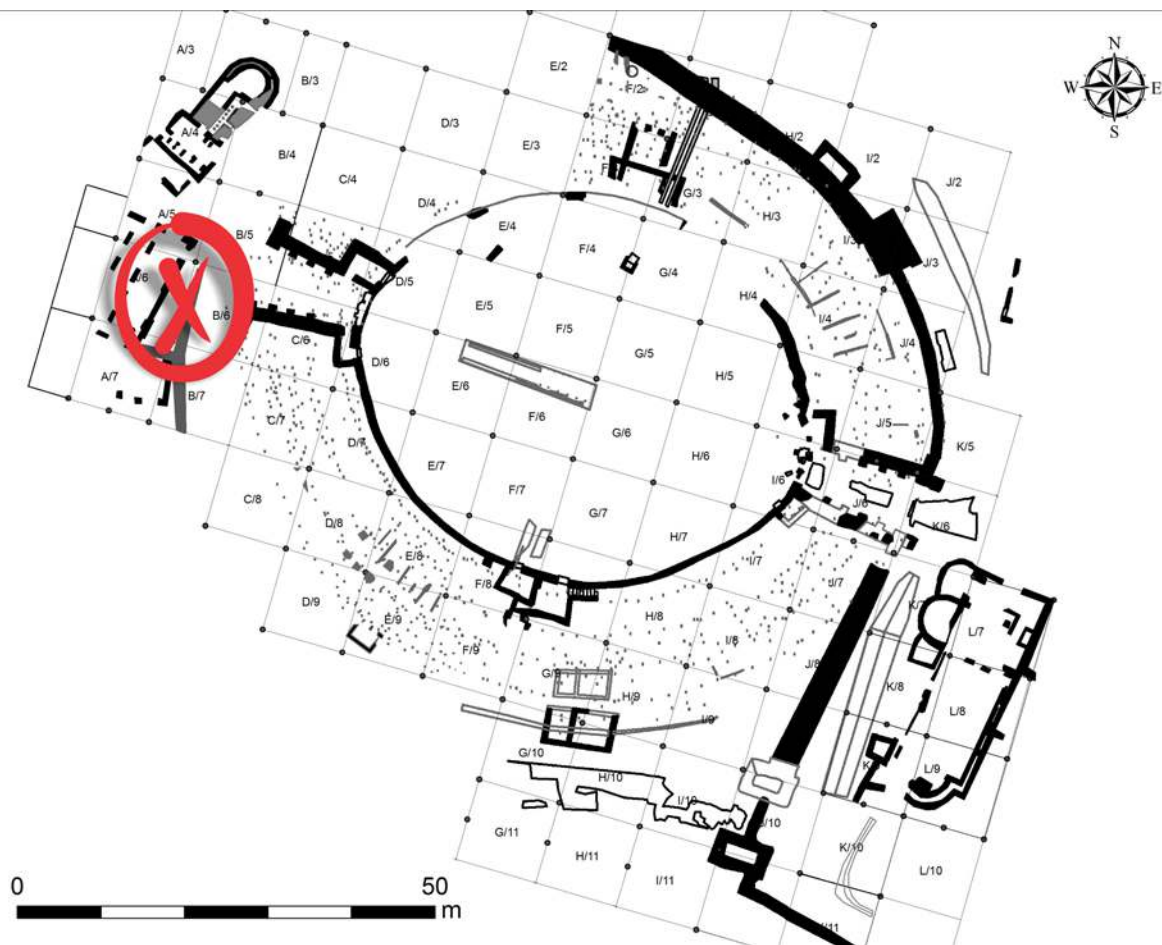


Fig. 3. The location of discovery of the red deer tibia, in relation to the position of the amphitheatre (I. Bogdanović)

of the weapon was suggested in accordance with the available literature. Finally, the representations of Roman hunting on mosaics, grave-stones and frescoes were analysed in order to compare the potential reconstruction of the hunt with the known depictions of this activity.

### RESULTS AND DISCUSSION

The fragment in question is the proximal part of the right tibia, that is, the part that makes a knee together with the femur and patella. Based on the fully fused proximal epiphysis, it can be assessed that the bone belonged to an adult animal since this epiphysis closes around 36 months of age (Heinrich 1991, 29). The sex of the animal could not have been suggested based on this element alone.

The shape of the trauma is irregular, and one small part is additionally broken recently, probably during the excavation (fig. 5). The length of both openings is about 3 cm, and the width of the opening on the medial side is about 1.2 cm. A proper narrowing on both sides indicates that this trauma was indeed caused by the projectile, possibly a weapon intended for long-range combat, such as arrowheads or throwing spears. Also, along the trauma edges, there is bone beveling visible, that is, bone breakage in the form of small flakes, which is often present when the bone is pierced by a sharp object, as demonstrated by experimental research carried out in England (Forsom / Smith 2017, 281-282).



Fig. 4. Fragmented red deer tibia with projectile trauma, views from lateral and medial side (M. Savić)

# Burial with Magical Gems in the Western Rock-cut Necropolis of the Roman Colony of *Deultum* in Thrace

ARCHAEOLOGIA BULGARICA  
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Krasimira KOSTOVA / Nicolay SHARANKOV

**Abstract:** The paper publishes four graves from the western necropolis of the Roman colony of *Deultum* / *Colonia Flavia Pacis Deultensium* (modern Debelt, Southeastern Bulgaria) dated to the late 2<sup>nd</sup> – early 3<sup>rd</sup> c. AD. Graves # 2 and # 3 are cut into the rock, separated by a brick wall and covered with marble slabs. The inventory of Grave # 2 includes two golden earrings, a necklace of glass beads, a bust-shaped bronze *balsamarium*, an iron strigil, and a glass *balsamarium*. Grave # 3 contains two magical gems made of jasper and mounted in gold pendants, as well as two bronze coins, one each of Septimius Severus and Caracalla. The first gem has a cock-headed anguipede on the obverse and a prayer asking for “help in everything” on the reverse; the second depicts Helios on a lion on the obverse, and a cock on the reverse. Both gems are inscribed with the names ΦΡΗΝ, ΑΒΡΑΣΑΞ and ΙΑΩ; the inscription on the bevelled edge of the first gem reads ὁ Ἄγγελος, and on that of the second – Σεμειλάμ.

**Key words:** *Deultum*, Roman necropolis, ancient magic, amulets.

The Roman colony of *Deultum*, or *Colonia Flavia Pacis Deultensium*, is located near the modern village of Debelt, on the northern bank in the lower reaches of Sredetska River, at about 15 km to the west of the city of Burgas. One of the two Roman colonies in Thrace, it was founded by Emperor Vespasian ca. AD 70, and initially settled with veterans from *legio VIII Augusta*.

## THE GRAVES<sup>1</sup>

In July 2012, during construction works on Vazrazhdane Street in the village of Debelt, vibrations of a concrete pump caused a large crack in the ground. The owner of house # 2 tried to clear the crack and found a marble slab broken in two which belonged to a double grave. This necessitated rescue excavations<sup>2</sup> which revealed the burials published here. The site was given the provisional name “Ancient tomb” (Κοστοβα 2013).

## Location

The site is located within the western necropolis of the Roman colony which occupies the southwestern built-up part of the modern village of Debelt, at about 150 m to the north of road A 79 (Burgas – Sredets – Elhovo) (**fig. 1**). Large part of the western necropolis is located on private lands which hinders its exploration. Traces of grave structures have been registered, mostly during digging for construction works in the modern village, but full-fledged archaeological excavations have rarely been possible.

The graves presented here were found under the west lane of Vazrazhdane Street (**fig. 2**). The street – which is not asphalted, but only partly covered with gravel – has been grooved by the flowing rain water, and the original ancient level was not preserved everywhere. The excavations revealed four grave structures with six individuals<sup>3</sup>. The rite was inhumation, with orientation northeast – southwest (**fig. 3**).

<sup>1</sup> By K. Kostova.

<sup>2</sup> The archaeological team, led by K. Kostova, included D. Harbalieva and E. Dakashev. Geodetic survey was executed by A. Kamenarov.

<sup>3</sup> For the anthropological analysis of the human remains, see the article of V. Russeva in this issue.



Fig. 14. The two gems and the separating tube from Grave # 3 (D. Harbalieva)



a



b

Fig. 15a-b. Gem of green jasper: obverse with cock-headed anguipede and reverse with inscription (N. Sharankov)



a



b

Fig. 16a-b. Gem of red jasper: obverse with Helios on lion and reverse with cock (N. Sharankov)



Fig. 17. Gold tube (N. Sharankov)

# Anthropological Investigation of Human Skeletal Remains from Late Roman Tombs in the Western Necropolis of *Deultum*<sup>1</sup>

ARCHAEOLOGIA BULGARICA  
XXVII, 1 (2023), 61-72

Victoria RUSSEVA

**Abstract:** The study investigates material from inhumations in high level of fragmentation using classical methods of the macroscopic anthropological analysis. As a result, the following remains have been recognised: in grave # 1: one male, at age about 30 to 50 years; grave # 2: one male, 35-40 years (skeleton in primary position) and a female, at about 30-40 years (singular, secondary laid bones); grave # 3: one male at young age, 20-25 up to 30 years, and single, secondary lied bones from an adult individual, possibly female; grave # 4: a male, 25 up to 30-35 years, and an adult individual, undetermined sex, both individuals presented in singular, secondary lied bones. Calculation of stature is possible for three males, two of them with medium height and one with short stature.

Affectation from degenerative joint disease and dental caries could be appraised as low in the small studied series, or even uncertain, considering the poor state of preservation of the material. The result could be explained with the relatively young age of buried. The evidence from the studied skeletal remains, even highly fragmented, points to a long-lasting chronic disease of the individual buried in the grave # 1. He should have been disabled for long time – with serious gait disorders and unable to perform most work activities typical for the period. The individual from grave # 2 (primary skeleton) possibly also suffered from difficulties in gait and movements and high pain in the feet and muscle with development of disability for some period before death. The destruction of the bone material does not allow concrete conclusion, but in view of the porosity found on the preserved portion of the endocranial surface of the same individual, one could suppose also a process in the meningeal layers, which could lead to increased intracranial pressure and result in head pain. One of the individuals from grave # 4 had also developed a stage of disability with painful movements of the hands, according to the defects of first metacarpals (thumb).

**Key words:** Roman *Deultum*, West necropolis, burials, anthropology.

## MATERIAL AND METHODS OF ANTHROPOLOGICAL IDENTIFICATION

The investigated material presents remains from inhumations at high level of fragmentation (**table 1/1-3**). The field and laboratory investigation are held by macroscopic anthropological analysis aiming documentation of the skeletal remains in the excavated complexes, determination of the number of individuals in the grave, age and sex identification of buried and recognition of individual specifics such as anthropological characteristics, pathological changes, traces from everyday activities. Initially, during field investigation, is determined primary (anatomical, when most bones are in articulation) and secondary (with disturbed anatomical position of skeletal parts) position of skeleton fragments. Presence of more than one individual in a grave is recognized after duplication of skeletal parts and high difference in anthropological characteristics of bones, which surpasses normal bilateral asymmetry, as dimensions, massiveness and relief development. More than one individual is ascertained in graves ## 2-4. Bone measurements are taken after standard methods (Martin / Saller 1959)

<sup>1</sup> See the paper of Kostova and Shrankov in this issue.

**Fig. 3.** Bone reaction on the distal parts of limbs. **1** Phalanx, eburnation on the basal articulation surface and bone reaction, grave # 2, skeleton in primary position. **2a** First, third-fifth right and first-fifth left metatarsals, eburnation and bone reaction of the heads, same defects on the basal articulation surfaces of found first row phalanges, grave # 2, skeleton in primary position. **2b** First-fourth left metatarsals, grave # 2, skeleton in primary position, detail of the heads. **3** First metacarpals, osteophytes and reactive bone on the edge of the articulation surfaces of heads, one of the skeletons, grave # 4



**Fig. 4.** Fragments from skull vault, grave # 2, skeleton in primary position. **1a** Ectocranial surface, bone reaction on external occipital protuberance. **1b** Ectocranial surface, bone reaction, detail. **2a** Endocranial surface, porous defects on the area of internal occipital crest. **2b** Endocranial surface, porous defects, detail

Documented pathological changes on the investigated skeletal material from graves # 1; # 2, skeleton in primary position; and possibly # 3, skeleton in primary position; and # 4, fragments in secondary position, are to be explained with development of long lasting bacterial infection. After the complex of pathological changes registered on skeletal remains from grave # 1, comprising advanced periostitis of bones of limbs, bilaterally and multifocally situated with no osteomyelitis, a treponemal infection could be assumed, following the description of the condition in Ortner (2003, 273-319). The argument about the onset and spreading of different types of this infection in the Old World and especially its venereal transmitting form (the syphilis) and differentiation between the last one and bejel, form of treponemal infection, endemic for the arid zones of North Africa and Middle East, appears still categorically unsolved. The interpretation of the changes found on the individual in grave # 1 as bejel contradicts the adult age of the studied individual. Lack of cranial fragments in the skeletal remains presents an additional obstacle to interpretation. At the other hand, possible unfinished progress of the disease could conceal the final picture of syphilitic bone reaction. The fragment from grave # 3 gives some possibilities for the interpretation of the destructions as acquired after development of *caries sicca*, but, first, it is very destroyed post-mortally and unsure, and, second, it comes from another skeleton, much more fragmented, lacking in pronounced pathological changes, as those observed on skeleton # 1. Treponemal infection and changes after bejel could explain the osteolytic defects of calcanei, metatarsals and phalanges from skeleton in grave # 2 and metacarpals from grave # 3, but again, the age of grown-up individuals contradicts to such interpretation, as this disease appears to have affected mostly child and adolescent ages. As mentioned above, it is more adequate to interpret changes on the bones of distal ends of extremities of these skeletons as the result of gout development, as described by Ortner (2003, 583-584). Possible presence of treponemal infection in the group could also explain reaction on the muscle attachment sites, as seen on the occipital fragment, gluteal tuberosity and medial, proximal shaft of tibia from grave # 2 and porous bone accumulation on sacrum with osteolytic destruction on its ala. The fragmentary and incomplete archaeological, respectively paleoanthropological record does not allow as well to answer the important question: if the increased mobility of specific human groups in the Roman Empire, or

# A Parade-Objekt Discovered in the Avar Cemetery from Șpălnaca (Alba County): A Unique Artifact in Avar Archaeology from Transylvania

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Călin COSMA

**Abstract:** In the Avar cemetery of Șpălnaca, in the point “Șugud” Alba county, which dates back to the end of the 7<sup>th</sup> century and the first decades of the 8<sup>th</sup> century, a bronze globular artifact was discovered inside a woman’s grave; the object was manufactured through casting and was silver plated afterward, both outside and inside. The globular space was decorated with geometric motifs, in the shape of triangles and rhombuses. The decorations were made by granulation, imprinted by pressure on the hemispherical surface, and fixed in blocks by an adhesive binding agent. The upper semi-calotte placed in the middle of the upper calotte was decorated with other three semi-oval fields that intersect at the place where the bands’ touch. Regardless of the functionality of the artifact, the technical characteristics of its manufacturing and ornamentation, as well as the fact that the piece was silvered, indicate that the woman, in whose grave the object was discovered within, was part of the elite of the Avar society in Transylvania.

**Key words:** Parade-objekt, Avar cemetery, Șpălnaca, Transylvania, Romania.

## INTRODUCTION

The present study aims to present an adornment, a unique artifact in Avar archaeology from Transylvania. The piece was only mentioned in an article published in 2018, but without being analyzed in detail (Cosma 2018, 161). I believe that the object in question, through its characteristics (technology, ornamentation, use), as will be seen in the following, deserves to be highlighted in a distinct study.

## THE CONTEXT OF THE DISCOVERY

An Avar cemetery has been archaeologically researched and is situated in the village of Șpălnaca (Hopârta commune, Alba county), at the point of “Șugud” (**map 1**) (Botezatu / Blăjan 1989, 351; Grosu et al. 1995, 276 and reference note 6; Protase et al. 2000, 104, note 143). According to the inventories of the 38 graves excavated so far, the necropolis can be chronologically placed between the end of the 7<sup>th</sup> century and the beginning of the 8<sup>th</sup> century.

The artifact presented in this article was discovered in a grave of a woman buried alongside a horse (grave # 37). The grave had a quadrilateral-rhombic shape, with a 2.30 meter length of the east-northeast, east-southeast, and west-southwest sides, and a 2 meter length on the Northwest side. It was contoured at 0.50-0.60 m, the bottom being at 2.90 m. Starting with a depth of 2 m, the grave was divided into two compartments separated by a median wall spared in clay, 0.50 m wide. One of the compartments contained the human skeleton, while the horse skeleton was in the other (**fig. 1**).

**The Human Skeleton Compartment:** The woman laid in the grave was approximately 50 years old. From an anthropological point of view, the woman had Mediterranean, Eastern European charac-



Fig. 4. A Parade-Objekt discovered in the Avar Cemetery from Șpálnaca (Alba County), Transylvania

calotte is 2.3 cm; the height of the upper calotte is 2.9 cm; the height of the upper sphere is 1.9 cm; the diameter of the tubular base is 3.2 cm. The maximum diameter of the calotte is 5.5 cm; the diameter of the upper sphere is 1.7 cm; the thickness of the sheet is 0.1 cm; the layer of silver deposited on the bronze plate has a thickness of microns (fig. 4). The artifact is preserved at the National Museum of Transylvanian History in Cluj-Napoca, with inventory # 47.897.

### Analogy

To my knowledge, the only analogy for the shape of the artifact comes from the localities of Voznesenka and Glodosy (fig. 5). The pieces were discovered in funerary contexts dated in the 7<sup>th</sup> century (Амброз 1981, 14; Ковалевская 1981, 107, fig. 4a/29, 34). The two objects display an ornament different from the artifact in Șpálnaca. These particular pieces were published as decorative harness elements. However, the published drawings show that the artifacts in southern Ukraine were devised to be inserted into another object, possibly at the end of a wooden tail or attached to textile material.

### The functionality of the piece

The empty interior of the piece from Șpálnaca suggests that it was inserted into another metal or wooden object, round in diameter, or

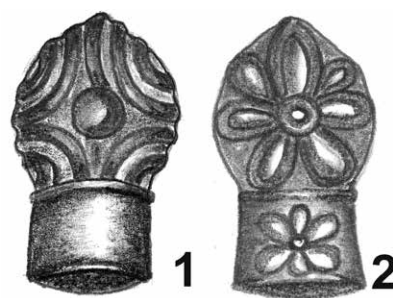


Fig. 5: 1 Voznesenka; 2 Glodosy; no scale (after Амброз 1981, 14 and Ковалевская 1981, 107, фиг. 4a/29, 34)

# REVIEWS

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Людмила Г. ХРУШКОВА.

Раннехристианская двойная церковь  
в Пицунде в Абхазии.

Москва / Сухум: Абгосиздат, 2020, 216 с.  
ISBN 978-5-6045437-5-7

[Liudmila G. KHRUSHKOVA.

The Early Christian double church  
in Pitsunda, Abkhazia. Moscow / Sukhum,  
2020, 216 pp. ISBN 978-5-6045437-5-7]

The double church in Pityous (modern Pitsunda) was first excavated by Teymuraz M. Mikeladze in 1956. However, as the excavation was not completed at that time, it was resumed half a century later. Liudmila Khrushkova (LK), a leading specialist in the cultural history of the peoples living on the East Coast of the Black Sea and its hinterland, assumed the field work in 2008-2009. The results were published in due time, as is usual for her, firstly in brief; among several publications we should mention the report for the International congress of Byzantine Studies, held in Sofia in 2011, and the presentation in the summary book of LK about the ecclesiastical architecture on the Eastern littoral of the Black Sea<sup>1</sup>. The new book of LK is entirely dedicated to the double church in Pitsunda, embracing it in two parts: one part dealing with its architecture, and another one presenting the archaeological material discovered during the excavation.

The discussion of the double church itself is preceded by an introduction into the church history of Pityous. The town was renowned for being one of the oldest episcopal centres in the Caucasus. Its bishop Stratophilus was the only representative of the Christian communities in the region at the Council of Nicaea in AD 325, and is known as the builder of the first church in Pityous. The definitive Christianization of the region, however, came about in the 6<sup>th</sup> century following centuries-long efforts of the Byzantine church which culminated in the reign of Justinian. Concurrently, the church organization and the hierarchy of the eparchies was created by the end of the Byzantine-Persian wars.

The subsequent church history of the region has some unclear moments due to lack of written sources, confusion of names of the towns and their location, which is perplexed furthermore by the constant resettlement of the local tribes. Therefore, when it was found that a cathedral in Soterioupolis is mentioned in 10<sup>th</sup> century's written sources, its identification became a point of debate among modern scholars. LK adheres to the opinion of Julian Andreevich Kulakovskiy, according to whom Soterioupolis, which had the rank of archbishopric and was subordinate to the Patriarch of Constantinople, should be recognized as the Late Antique Pityous. This relationship would mean that Pityous – Soterioupolis – Pitsunda is one of the most important religious and ecclesiastical centres in Abkhazia from the period of Constantine the Great up to modern times.

<sup>1</sup> Людмила Г. Хрушкова, Восточное Причерноморье в византийскую эпоху. История. Архитектура. Археология [Liudmila G. Khrushkova, The East Coast of the Black Sea in the Byzantine Era. History. Architecture. Archaeology]. Lomonosov Moscow State University, Faculty of History. Kaliningrad / Moscow: ПД: „РОС-ДАОФК“, 2018, 480 p.+ 660 Ill. ISBN 978-5-6040479-8-9, spec. 108–118; cf. the review of the book by J. Valeva in Rivista di Archeologia Cristiana XCVII, 2021, 1, 246-249.

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